ABSTRACT OF THE DISCLOSURE

A secure interface between clients and services in a distributed computing environment is described. Method gates may provide an interface to remotely invoke functions of a service. A method gate may be generated from an advertisement that may include definitions for one or more messages for remotely invoking functions of the service. A client may generate messages containing representations of method calls. The service may invoke functions that correspond to the set of messages. A method gate on the service may unmarshal the message and invoke the function. The client may receive the results of the function directly. Alternatively, the results may be stored, an advertisement to the results may be provided, and a gate may be generated to access the results. Message gates may perform the sending and receiving of the messages between the client and service. In one embodiment, functions of the service may be computer programming language (e.g. Java) methods. In one embodiment, a message including a representation of a method call may be generated when no actual method call was made. In one embodiment, a method call may be transformed into messages that may be sent to the service; the service may not know that the messages were generated from a method call. In one embodiment, a service may transform messages requesting functions into method calls; the client may not know that the service is invoking methods to perform the functions. A credential may be embedded in messages and used for message authentication on the service.